

IN THE SPECIFICATION:

Please amend the specification as shown below:

Please replace the paragraph beginning at page 24, line 18, with the following amended paragraph:

Originally, an IC often uses a differential [figure] amplifier to suppress an influence etc. due to fluctuations in element characteristics or those in characteristic variation owing to temperatures. With this, a demodulated signal generation portion constituted of differential circuits is shown as a third configuration in FIG. 8. In a demodulation signal generation portion 40c having this third configuration, a sampling block 40c-1 performs sampling or inversed-polarity sampling on the intermediate frequency signal RIFs based on the control signal DP from the demodulation control portion 70, so that a signal synthesis block 40c-2 synthesizes the sampled signals to obtain the demodulated signals PI and PQ.

Please replace the paragraph beginning on page 25, line 1, with the following amended paragraph:

The intermediate frequency signal RIFs is applied between input terminals [431p] ~~431-p~~ and [431n] ~~431-n~~ of the demodulated signal generation portion 40c. The input terminal [431p] ~~431-p~~ is connected through a switch circuit 432-1 in the sampling block 40c-1 to an inverting input terminal of a differential amplifier 436 that constitutes the signal synthesis block 40c-2. Further, it is connected through a switch circuit 432-4 to a non-inverting input terminal of the differential amplifier 436. Furthermore, it is connected through a switch circuit 433-1 to an inverting input terminal of a differential amplifier 437 and also through a switch circuit 433-4 to a non-inverting input terminal of the differential amplifier 437.

Please replace the paragraph beginning on page 25, line 11, with the following amended paragraph:

The input terminal [431n] ~~431-n~~ is connected through a switch circuit 432-2 to the non-inverting input terminal of the differential amplifier 436 and also through a switch circuit 432-3 to the inverting input terminal of the differential amplifier 436. Further, it is connected through a switch circuit 433-2 to the non-inverting input terminal of the differential amplifier 437 and also through a switch circuit 433-3 to the inverting input terminal of the differential amplifier 437. Furthermore, a capacitor 434 is provided between the input terminals of the differential amplifier 436 and a capacitor 435 is also provided between the input terminals of the differential amplifier 437.

Please replace the paragraph beginning on page 25, line 21, with the following amended paragraph:

The switch circuits 432-1 and 432-2 are driven by the above-described control signal $\phi 1$. Similarly, the switch circuits 433-1 and 433-2 are driven by the control signal $\phi 2$ and the switch circuits 432-3 and 432-4, by the control signal $\phi[3]$. Further, the switch circuits 433-3 and 433-4 are driven by the control signal $\phi[4]$.

Please replace the paragraph beginning on page 29, line 10, with the following amended paragraph:

In FIG. 11, a source of a transistor 701-p is connected to a terminal of a capacitor 702-p and a drain of a transistor 703-p. The other terminal of the capacitor 702-p is connected to a drain of a transistor 704-p and an inverting input terminal of a differential amplifier 705. Sources of the transistors 703-p and 704-p are connected to a positive-pole side output terminal of the differential amplifier 705.

Please replace the paragraph beginning on page 29, line 16, with the following amended paragraph:

A source of the transistor 701-n is connected to a terminal of a capacitor 702-n and a drain of a transistor 703-n. The other terminal of the capacitor 702-n is connected to a drain of a transistor 704-n and a non-inverting input terminal of the differential amplifier 705. Sources of the transistors 703-n and 704-n are connected to a negative-pole side output terminal of the differential amplifier 705.

Please replace the paragraph beginning on page 32, line 6, with the following amended paragraph:

The switched capacitor filter block 45-3 is constituted of a switched capacitor filter. The switched capacitor filter replaces, for example, a resistor R_g connected to an inverting input terminal of a differential amplifier 61 by a negative switched capacitor trans-resistance 62 indicated by a [broken] solid line. Further, a feedback resistor R_f connected in parallel to an integration capacitor 63 provided between the inverting input terminal and an output terminal of the differential amplifier 61 is replaced by a positive switched capacitor transresistance 64 indicated by a [broken] solid line.

Please replace the paragraph beginning on page 35, line 17, with the following amended paragraph:

The other terminal of the capacitor 642-p is connected through a switch circuit 645-p to the output terminal of the differential amplifier 61 and also grounded through a switch circuit 646-p. The other terminal of the switch circuit 644-p is connected to the inverting input terminal and also to the positive-pole side output terminal through an integration capacitor [63p] 63-p.

Please replace the paragraph beginning on page 35, line 23, and continuing on page 36, with the following amended paragraph:

The other terminal of the capacitor 622-n is connected to the other terminal of the switch circuit 625 and one terminals of switch circuit 644-n and capacitor 642-n. The other terminal of the switch circuit 642-n is connected through a switch circuit 645-n to the output terminal of the

differential amplifier 61 and also grounded through a switch circuit 646-n. The other terminal of the switch circuit [644n] ~~644-n~~ is connected to the non-inverting input terminal and also to a negative-pole side output terminal through an integration capacitor [63n] ~~63-n~~.

Please replace the paragraph beginning on page 40, line 11, with the following amended paragraph:

The other terminal of the switch circuit 647-p is connected to the inverting input terminal and also to the output terminal through the integration capacitor [63p] ~~63-p~~. Further, the other terminal of the switch circuit 648-p is connected to the non-inverting input terminal and also to the output terminal through an integration capacitor [63n] ~~63-n~~.